REMARKS

Present Status of the Application

The Final Office Action rejected claims 1, 4-6, 10 and 12 under 35 U.S.C. 103(a) as being anticipated by Horan et al. (US patent number 5,892,964, hereafter "Horan") in view of Lee et al. patent 6,789,154 (hereinafter "Lee"). Upon entry of the amendments in this response, claims 1, 4-6, 10 and 12 remain pending in the present application. More specifically, claim 1 is directly amended; claims 4-6, 10 and 12 are previously presented without amendments in this reply. These amendments are specifically described hereinafter. It is believed that the foregoing amendments add no new matter to the present application. Reconsideration of those claims is respectfully requested.

Discussion of Claim Rejection under 35 USC 103(a)

The Office Action rejected claims 1, 4-6, 10 and 12 under 35 U.S.C. 103(a) as being anticipated by Horan in view of Lee. Applicant respectively transverse the rejections for at least the reasons set forth below.

Independent claim 1 is allowable for at least the reason that Horan and Lee, alone or combination, do not disclose, teach, or suggest the limitations in claim 1. More specifically, the meaning of expansion the first AGP bus into the first extended bus and the first and second AGP buses is clear from Fig. 2 of the application. Without the extended bus structure, the system in Fig. 2 just has a PCI I bus (original system bus) 240 and an AGP I bus 220. With the extended

bus structure of claim 1, the system in Fig. 2 at least has the PCI I bus 240, the AGP I bus 220, and further expanded PCI II bus 245 and AGP II bus 225. The expanded PCI II bus 245 and AGP II bus 225 are expanded from the extended bus structure of claim 1. Which also means that the original system bus 240 and the first AGP bus (AGP I bus 220) are at lest expanded into the original system bus 240, the first extended bus (PCI II bus 245) and the first and second AGP buses (AGP I and AGP II bus 220 and 225). But by Horan, the first AGP bus (AGP 0 bus 416a) is only expanded into the first and second AGP buses (AGP 0 and 1 buses 416a and 416b). From teaching of Horan, no further system bus (PCI bus) is extended and accordingly the system just has the original system bus (PCI bus 109) and two AGP buses 416a/416b. Which also means the original system bus 109 and the AGP bus 416a are only expanded into the original system bus 109 and the AGP buses 416a/416b. Besides, Horan does not disclose that a first extended bus (PCI bus 109) is used for expanding the first AGP bus and the first AGP bus is expanded into first extended bus and first and second accelerated graphics port buses.

Secondly, the combination of Horan and Lee does not suggest any disclosure about how to expand a system having only the original system bus (PCI bus) and an AGP bus into a system having the original system bus (PCI bus), the extended bus and two AGP buses. More specially, in Lee, although control modules 720/730 are disclosed, the control modules 720/730 are components of the graphics processor 120. If combined, Lee's control modules 720/730 should be added to the video graphics controller 110 of Horan's Fig. 1, not added to the core logic 104. As known, a graphics processor is totally different and not the same with a control chip set in a computer system and the modification cannot render the prior art unsatisfactory for its intended

purpose. Therefore, the Lee's control modules 720/730 still fails to teach a control chip set coupled to the first AGP bus. The combination of Horan and Lee still fails to the control chip set and the first bridge coupled to the control chip set via the first AGP bus and further coupled to the second AGP bus and the first extended bus.

Thus, Horan and Lee, alone or combination, do not make claim 1 obvious, and the rejection should be withdrawn.

If independent claim 1 is allowable over Horan, then its dependent claims 4-6 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claim 1.

As for claim 4 and another independent claim 10, a first extended bus controller and an extended AGP controller are not built-in a main AGP controller. But in Horan's Fig. 3, the AGP controller 210b and the arbiter 216 are built-in the main controller 218a. The circuit configuration between Horan's Fig. 3 and claims 4/10 is totally different. Secondly, Horan teaches a main controller 218 coupled to the first AGP bus 304, an AGP controller 210b coupled to the bus on the left of the bus 211, another AGP controller 210a coupled to another AGP bus 302 and an arbiter 216 coupled to the AGP buses 302 and 304. The arbiter 216 of Horan's Fig. 3 is only coupled to the AGP buses 302 and 304, not coupled to the controllers 218/210a/210b, but in claims 4/10 of the application, the flow controller is coupled between/to the main AGP controller, the extended AGP controller and the first extended bus controller and does not directly coupled to the first and second AGP buses. Besides, Horan's AGP/PCI arbiter 216 arbitrates between the AGP buses 302/304 and the PCI bus 109, which means the arbiter 216

does not arbitrate between the AGP buses 302/304 and the bus on the left of the bus 211. It is clear that Horan's arbiter 216 is different from claims 4/10's the flow controller which is coupled to the main AGP controller, the extended AGP controller and the first extended bus controller for arbitrating and controlling flow direction of data and signal into/from the main accelerated graphics port controller, the extended accelerated graphics port controller and the first extended bus controller.

Independent claim 10 is allowable for at least the reason that Horan does not disclose, teach, or suggest the above features. Thus, Horan does not make claims 4/10 obvious, and the rejection should be withdrawn.

If independent claim 10 is allowable over Horan and Lee, alone or combination, then its dependent claim 12 is allowable as a matter of law, because the dependent claim contains all features of the respective independent claim 10.

Discussion of Claim amendments

The Claim amendments in this response do not introduce any new matter because the original bus added in the currently amended claim 1 is at least supported by the PCI I bus 240 in Fig. 2 of the application.

Prior Art Made of Record

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

Application No.: 09/922,046 **Docket No.: JCLA6385-R**

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1, 4-6, 10 and 12 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,
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